OTS-Probes

Feb. 21, 2023

Handbook

【Description】

This product provides an accurate detection of the specific variant allele frequency in human DNA with digital PCR systems.

【Kit Contents】

This product is a dried mixture of the following 4 types of oligonucleotides corresponding to detection of the targeted mutation.

- Forward primer
- Reverse primer
- Wild-type probe (HEX)
- Mutant-type probe (FAM)

【Items and Equipment to Use】

- DNase/RNase-free distilled water
- Laboratory equipment such as Pipetman and micro tubes
- Digital-PCR system and its consumable items

OTS-Probes were validated in Bio-Rad QX200 Droplet Digital PCR system and Thermo Fisher Scientific QuantStudio 3D Digital PCR system / QuantStudio Absolute Q Digital PCR system.

【Preparation】

Add 15μL of DNase/RNase-free distilled water and dissolve the red-purple adhesion on the wall and bottom of tube.

【Shipping and Storage】

Dried OTS-Probes can be transport at room temperature. Store at −20 to −80°C before dissolving in water. Store at −20°C after dissolving in water. It is recommended to use up within 1 year after dissolving in water and within 2 years even before dissolving in water. Freeze-thaw can be repeated but mix well with a vortex after thawing. Keep OTS-Probes in dark at any conditions.

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【Protocols】

<QX200 PCR reaction setup>

ddPCR Supermix for Probes (No dUTP)	10 μL
OTS-Probes	2 μL
Template + Water	8 μL
Total	20 μL

<QuantStudio 3D reaction setup>

QuantStudio 3D Digital PCR Master Mix v	7.5 μL
OTS-Probes	1.5 μL
Template + Water	6.5 μL
Total	15 μL

<QuantStudio Absolute Q PCR reaction setup>

5X Absolute Q Master Mix	2 μL
OTS-Probes	1 μL
Template + Water	7 μL
Total	10 μL

<QuantStudio 3D/QX200 cycler conditions>

Step	Temperature	Time	Cycle
1	95℃	10 min	1
2	94℃	30 sec	40
3	60℃	1 min	
4	98℃	10 min	1
5	4℃	∞	1

<QuantStudio Absolute Q cycler conditions>

Step	Temperature	Time	Cycle
1	96℃	10 min	1
2	96℃	5 sec	40
3	60℃	30 sec	

- Since this product contains 15 μL, you may perform about 6-7 assays with QX200, 8-9 assays with QuantStudio 3D, and 13-14 assays with QuantStudio Absolute Q.
- Some OTS-Probes require DMSO and/or 7-deaza dGTP in the PCR reaction as additive agents. Please check the detailed description of your OTS-Probes.
- Some OTS-Probes use 56°C or 58°C for the annealing temperature in the PCR cycle (Step 3). Please check the detailed description of your OTS-Probes.

【Product Use Limitation and Notes】

- OTS-Probes are intended for molecular biology applications. This product is not intended for other purposes.
- We do not guarantee the validity of OTS-Probes except the protocol of this handbook.
- We recommend all users of OTS-Probes to clean up laboratory environment and equipment, and be careful not to contaminate DNA templates and other chemicals.

【About Us】

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"OTS-Probes" is the product developed and manufactured by Quantdetect, Inc., based on the patented technology developed by Iwate Medical University Institute for Biomedical Sciences and transferred to Quantdetect, Inc..